LP3 laser player user manual

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1 Description

LP3 Laser Player is a high speed laser player. Maximum frequency up to 400MHz, it's enough to play ild file in real time. *LP3 Laser Player* is very easy to play, you can press mode button to switch play mode (sound active or playing in order), and press group button to change group (group is a folder, it's very convenient to select program rapidly), and press program + (-) to select program. The ild format file is very easy to obtain, and have much software to create. You just need to copy these files to SD card. You can create any directories and sub-directories that you want except named "BEAMS" directory, and copy ild files to these directories. Every directory is a group. You can switch the directory by group button.

LP3 Laser Player hardware support interfaces as following:

- ✓ SD/MMC card storage
- ✓ Mode and program switch buttons
- ✓ MIC music activation control
- ✓ MIC sensitive adjustment
- ✓ Standard ILDA DB-25 output interface

LP3 Laser Player can play standard ild file and LP3 defined shw beam file.

Note: The usb interface is only for developing, not open to users.

2 System functions

2.1 SD/MMC Card

SD/MMC card storage all the laser program files. You just need copy these files from PC to your SD/MMC card. You can create any directories and sub-directories that you want except named BEAMS directory, and copy ild files to these directories. Every directory is a group. You can switch the directory by group button.

Caution: Please don't delete the "BEAMS" directory or modify this directory's name in SD card, this directory is used for beam files, and all of beam files are placed by publisher

2.2 Buttons

LP3 Laser Player provides 5 buttons for control.

1. Mode: Play mode:
    1- Music Activation: Music control mode. It will shut off laser after 1 second the beat is not detected by default. You can change this value by modifying the variable MUSIC_DELAY_TIME in the LP3.ini file
    2- Animation: Loop playback user selected animation file, these files have been sorted by the file name in the selected folder. You can switch the group and program file in this mode, after you switch play mode or program file, you must press the play/stop button to confirm laser output
2. Group: Every directory is a group. You can select group index in loop
3. Program+: Increase playing file index 1 in the selected directory. You can select file index in loop
4. Program-: Decrease playing file index 1 in the selected directory. You can select file index in loop
5. Play/pause: Play/pause current playing program file (pause will shut off laser output)

2.3 LED indicators

LP3 Laser Player has 5 led to indicate current station. They are auto mode, music activation mode and play/pause led, power led and MIC led. Red/green/blue led is coincident with corresponding laser head, and power led is always on, MIC led will blink when sound is detected in music control mode.

2.4 ILDA Output Interface

ILDA interface is completely compliant to ILDA standard. So any laser light with standard ILDA input interface can be controlled by *LP3 Laser Player*.

2.5 MIC and MIC sensitive button

LP3 Laser Player has a microphone to detect music beat. MIC sensitive adjustor is used to adjust microphone sensitivity.

3 System features

Features	Description
X/Y DAC	12 bit (-5V to +5V)
Red, Green, Blue DAC	8 bit (0V to +2.5V, 0V to -2.5V)
Intensity/Blanking	8 bit (0V to +2.5V, 0V to -2.5V)
SD/MMC card	Up to 2G

4 Appendix

4.1 pannix.ini configuration

[SYSTEM]

1) INVERT_X: Invert x coordination, don't invert x is 0 (default), invert x is 1, other value is invalid
2) INVERT_Y: Invert y coordination, don't invert y is 0 (default), invert y is 1, other value is invalid
3) SWAP_XY: Swap x/y coordination, don't swap x/y is 0 (default), swap x/y is 1, other value is invalid
4) COLOR_MODE: NORMAL=1, INVERT=2, MONOCHROME=3, GRAYSCALE=4, CVL=5, other value is invalid
5) COLOR_PALETTE: PANGOLIN=1, LASERILLUSIONS=2, X29=3, ILDAPALETTE=4, other value is invalid

[USER]

1) PLAY_MODE: Music control=1, playing in order in loop =2, other value is invalid
2) DIR_INDEX: The index of playing group (directory), it starts from 1
3) FILE_INDEX: The index of playing file index, it starts from 1
4) SCANNER_SPEED: Points number per second for scanner, maximum is 50K/s
5) FRAME_RATE: Frame rate, maximum is 30F/s
6) ZOOM_SCALE: Zoom scale, minimum is 1 (%), and maximum is 100 (%)